GENERAL SERVICES ADMINISTRATION
Washington, DC 20405

January 12, 1993

TRANSMITTAL CIRCULAR 90-7 -- 1990 LOOSELEAF EDITION
FEDERAL INFORMATION RESOURCES MANAGEMENT REGULATION

Contents

Explanations

Item I
(IR 1)

Summary: This amendment implements provisions of Executive Order 12845 requiring agencies to purchase energy efficient computer equipment.

Effective Date: January 7, 1994

Supplementary Information: (1) This change is being made to bring the FIRMR into conformance with Executive Order 12845, dated April 21, 1993. This order recognizes that the Federal Government, the largest purchaser of computer equipment in the world, should set an example in the energy efficient operation of its facilities and the procurement of pollution preventing technologies. The use of energy efficient computers can help achieve this goal and also minimize the Government's operating costs. The order requires, among other things, that

the heads of Federal agencies shall ensure that by October 18, 1993, all acquisitions of microcomputers, including personal computers, monitors, and printers, meet the Environmental Protection Agency (EPA) "Energy Star" requirements for energy efficiency. The heads of agencies may grant exemptions, on a case-by-case basis, to this requirement based upon the commercial availability of qualifying equipment, significant cost differential of the equipment, the agency's performance requirements, and the agency's mission. Any exemptions granted must be reported to GSA annually. The FIRMR is revised to require that all agency requirements analyses include requirements for energy efficiency. These requirements must be reflected in requests for proposals (RFPs). The FIRMR is further revised to require that, at a minimum, agencies acquire microcomputers, monitors and printers equipped with the energy efficient low-power standby feature as defined by the EPA Energy Star computer program. The address where exemptions must be sent is also provided in this change. The first report is due October 18, 1994. FIRMR Bulletin C-35 provides more detailed guidance on energy efficient requirements that should be included in RFPs.

Item II (Bul. C-9, Rev. 1)

Purpose: This bulletin describes nonmandatory GSA services and assistance programs available for use by Federal agencies. This bulletin was revised to reflect added nonmandatory GSA services and assistance programs available for use by Federal agencies.

Item III (Bul C-27, Rev. 1)

Purpose: This bulletin provides an updated listing of outdated FIP equipment and guidelines for determining whether FIP equipment is obsolescent.

Item IV (Bul. C-35)

Purpose: This bulletin describes procedures that promote energy-efficiency in the acquisition, management, and use of microcomputers and associated computer equipment.

Item V (App. C)	Action:	This page updates the list of current FIRMR issuances. Specifically, Section C is updated to reflect the revisions to FIRMR Bulletins C-9 and C-27, and the issuance of Bulletin C-35.
Item VI (Index)	Action:	The index is updated to reflect the revised bulletins.

Filing Instructions

Items I thru VI Remove existing pages and insert revised pages in accordance with the following instructions:

In	Remove Pages	Insert pages
PART 201-17	17-i & 17-1	17-i & 17-1
PART 201-20	20-i thru 20-7	20-i thru 20-7
Appendix B	Bul. C-9	Bul. C-9/Rev. 1
Appendix B	Bul. C-27/Rev. 1	Bul. C-27/Rev. 2
Appendix B	--	Bul. C-35
Appendix C	C-3 & C-4	C-3 & C-4
Index	5, 6, 13, 14, 17 & 18	5, 6, 13, 14, 17 & 18

Pen and Ink Changes

Appendix B Make the following "pen and ink changes" to the bulletin indicated below:

C-30. On page 2, in paragraph 5a, in the tenth line, GSA/KMAS should be changed to GSA/KMAD. Also in paragraph 5a, in twelfth line, the correct phone number is (703) 305-6808 for both commercial and FTS. In Attachment A, page 2, in paragraph 5, in the ninth line, "10.d" is corrected to read "9.e".

Point of Contact. Questions concerning your agency's distribution of Transmittal Circulars or the FIRMR should be directed to your agency's GPO Liaison Officer. If additional assistance is needed, please contact R. Stewart Randall, Jr., Regulations Analysis Division (KMR), telephone, commercial or FTS (202) 501-3194 (v) or (202) 501-0657 (tdd).

FRED L. SIMS
Deputy Assistant Commissioner
for Information Resources
Management Policy

SUBCHAPTER C—MANAGEMENT AND USE OF FEDERAL INFORMATION PROCESSING (FIP) RESOURCES

PART 201-17—PREDOMINANT CONSIDERATIONS

TABLE OF CONTENTS

PART 201-17--PREDOMINANT CONSIDERATIONS

§ 201-17.000 Scope of part.

This part provides a brief overview of the predominant policies of subchapter C.

§ 201-17.001 Predominant considerations.

The policies prescribed in subchapter C are designed to promote success in the acquisition, management, and use of Federal information processing (FIP) resources by emphasizing the importance for agencies to--

(a) Develop and annually revise, in coordination with budget activities, a 5-year plan to meet the agency's information technology needs;

(b) Base requirements for FIP resources on agency mission, programs, and related information needs;

(c) Consider the potential for deploying projected technological advances of FIP resources to enhance future performance of programs and operations in support of the agency mission;

(d) Acquire FIP resources that result in the most advantageous alternative to the Government after consideration of--

(1) Sharing and reuse of existing FIP resources,

(2) Use of General Services Administration (GSA) services, and

(3) Acquisition of agency resources by contracting;

(e) Establish responsibility through a designated senior official (DSO) when contracting for FIP resources under a delegation of GSA's exclusive procurement authority;

(f) Assign an individual (such as a Trail Boss) responsible for coordinating programmatic, technical, and contracting functions when acquiring FIP resources;

(g) Achieve full and open competition to the maximum extent practicable;

(h) Acquire resources that comply with Federal standards;

(i) Provide for security of resources, protection of information about individuals, continuity of operations, and national security and emergency preparedness;

(j) Provide individuals with disabilities (employees and others who use the agency's electronic office equipment) equivalent access to electronic office equipment;

(k) Provide telecommunications access to hearing and speech impaired individuals;

(l) Review and evaluate existing resources and related management and acquisition activities on an ongoing basis;

(m) Replace outdated resources that are no longer the most advantageous alternative for satisfying the agency's requirements; and

(n) Acquire microcomputers, monitors, and printers that are energy efficient.

Sec.

Subpart 201-20.1—Requirements Analysis

Subpart 201-20.2—Analysis of Alternatives

Subpart 201-20.3—Implementation

Authority: 40 U.S.C. 486(c) and 751(f).

PART 201-20—ACQUISITION

§ 201-20.000 Scope of part.

This part prescribes policies and procedures for acquisition of Federal information processing (FIP) resources by agencies.

§ 201-20.001 General.

(a) *Acquisition*, as used in this part—

(1) Consists of a series of steps beginning with the requirements analysis and ending with the implementation of the most advantageous alternative to satisfy the requirement; and

(2) Includes obtaining FIP resources both from sources external to the agency and through in-house sources or development.

(b) Acquisition by contracting is addressed in part 201-39.

(c) Technical assistance in support of acquisitions is available, on a cost reimbursable basis, through GSA's Office of Technical Assistance.

(d) Guidance on conducting a requirements analysis and an analysis of alternatives is contained in the GSA Acquisition Guide series.

Subpart 201-20.1—Requirements Analysis

§ 201-20.100 Scope of subpart.

This subpart prescribes policies and procedures for determining requirements for FIP resources.

§ 201-20.101 General.

The requirements analysis is used to determine and document requirements for FIP resources. It provides the basis on which the alternatives for meeting the requirements can be analyzed.

§ 201-20.102 Policy.

Agencies shall establish and document requirements for FIP resources by conducting a requirements analysis commensurate with the size and complexity of the need.

§ 201-20.103 Procedures.

The requirements analysis shall include, at a minimum, consideration of the following factors:

§ 201-20.103-1 Information needs.

Agencies shall determine their information needs by considering—

(a) Their need to provide information to and obtain information from the public and other agencies;

(b) Available sources of information;

(c) Information format, media, quantity, integrity, security, and timeliness requirements;

(d) Essential records and information required to support current and future program and mission needs;

(e) Agency records retention and disposition requirements and the need to assure archival acceptability of permanent or long-term records;

(f) The integration of electronic records with other agency records; and

(g) Existing or planned intra or interagency interoperability requirements.

§ 201-20.103-2 System life.

Agencies shall establish a system life as a part of the requirements analysis. If the acquiring activity can predict reuse of the FIP resource by another component within the agency after it no longer meets the acquiring activity's needs, the reuse period shall be included in the system life.

§ 201-20.103-3 Description of requirements.

Agencies shall—

(a) Base requirements on mission needs expressed in the form of opportunities for increased economy and efficiency, new or changed program requirements, or deficiencies in existing capabilities;

(b) Describe requirements in terms of functions to be performed and performance to be achieved, unless a more restrictive statement of requirements is necessary to satisfy the needs of the agency;

(c) Describe requirements in a manner that will attain full and open competition when contracting for FIP resources unless other than full and open competition is justified in accordance with subpart 201-39.6 and FAR part 6;

(d) Document in the requirements analysis the quantitative or qualitative requirements that must be met and why those requirements are necessary to meet the mission needs; and

(e) Consider aggregating requirements on organizational or functional bases and conducting a requirements analysis on the basis of the aggregated requirements.

§ 201-20.103-4 Compatibility-limited requirements.

(a) Agencies shall establish compatibility-limited requirements for FIP resources only to the extent necessary to satisfy the needs of the agency.

(b) Agencies shall justify compatibility-limited requirements for FIP resources on the basis of at least one of the following:

(1) The agency has technical or operational requirements for compatibility when adding resources to, or replacing a portion of, an installed base of resources, and the agency determines that replacing additional portions of the installed base to avoid compatibility-limited requirements is not advantageous to the Government; or

(2) The agency determines that the risk and impact of a conversion failure on agency critical mission needs would be so great that acquiring non-compatible resources is not a feasible alternative.

§ 201-20.103-5 Justification for specific make and model.

Technical and requirements personnel shall justify a requirement that can only be met by specific make and model resources in accordance with subpart 201-39.6.

§ 201-20.103-6 Security requirements.

Agencies shall—

(a) Identify security and privacy requirements in the requirements analysis;

(b) Identify security requirements necessary to protect classified and sensitive information by listing the potential threats and hazards and describing the measures needed to provide protection; and

(c) Identify physical and environmental security safeguards.

§ 201-20.103-7 Accessibility requirements for individuals with disabilities.

(a) Agencies shall provide equivalent access to electronic office equipment for individuals with disabilities (employees and others who use the agency's electronic office equipment) to the extent both present and future needs for such access are determined by the agency.

(b) Agencies shall provide telecommunications access to hearing and speech-impaired individuals to the extent both present and future needs for such access are identified in the requirements analysis. Telecommunications access for hearing and speech impaired individuals shall include education and training on the services and features of the GSA relay service.

(1) Agencies shall publish access numbers for TDD and TDD-related devices in telephone directories and provide such agency numbers to GSA for inclusion in the Federal TDD Directory.

(2) Agencies shall display in their buildings or offices the standard logo specified by GSA for indicating the presence of TDD or TDD-related equipment.

(c) Agencies shall consider the guidance contained in FIRMR Bulletins C-8 and C-10 on the subject of accessibility requirements for individuals with disabilities.

§ 201-20.103-8 Space and environmental requirements.

Agencies shall consider space and environmental factors when conducting the requirements analysis.

§ 201-20.103-9 Workload and related requirements.

As a minimum, agencies shall document in the requirements analysis the following factors, as applicable:

(a) Projected processing, storage, data entry, communications, and support services workload requirements over the system life and how best to address workload uncertainties.

(b) Expandability requirements.

(c) A performance evaluation of currently installed FIP resources.

(d) Contingency requirements for FIP resources whose loss or failure would prevent the agency from performing its mission, or have an adverse effect on the nation.

(e) Other requirements that must be met or constraints that must be considered.

§ 201-20.103-10 Records management requirements.

Agencies shall include records management factors in the requirements analysis.

201-20.103-11 Energy efficiency requirements for microcomputers.

(a) Agencies shall include requirements for energy efficiency in the requirements analysis. At a minimum, agencies shall require that microcomputers, including personal computers, monitors, and printers,

acquired by the agency be equipped with the energy efficient low-power standby feature as defined by the Environmental Protection Agency Energy Star computer program, unless the equipment meets the Energy Star requirements at all times. To the extent permitted by law, agencies shall include this specification in all existing contracts, if any additional costs would be offset by the potential energy savings.

(b) Agencies shall consider the guidance contained in FIRMR Bulletin C-35 in developing their requirements and for the specific procedure for reporting exempted acquisitions.

(c) Agencies shall report annually, by October 18 on acquisitions exempted from this requirement. Reports shall be sent to: GSA, Acquisition Reviews Division (KMA), 18th & F Streets, NW, Washington DC 20405.

(d) Agencies shall ensure that Federal users are made aware of the significant economic and environmental benefits of the low energy efficient power standby feature and its aggressive use by including this information in routine computer training courses.

Subpart 201-20.2—Analysis of Alternatives

§ 201-20.200 Scope of subpart.

This subpart prescribes policies and procedures for identifying and analyzing feasible alternatives that satisfy requirements for FIP resources.

§ 201-20.201 General.

(a) The statement of requirements resulting from the requirements analysis is the basis on which the analysis of alternatives is conducted. The purpose of the analysis of alternatives is to compare and evaluate various alternatives for meeting the requirements and to determine which alternative is the most advantageous alternative to the Government.

(b) The FIRMR bulletin series provides guidance on GSA programs for meeting agencies' requirements and potential sources of FIP resources sharing.

§ 201-20.202 Policy.

Using the results of the requirements analysis as the basis, agencies shall conduct an analysis of alternatives, commensurate with the size and complexity of the requirement, to identify the most advantageous alternative to the Government.

§ 201-20.203 Procedures.

The General Services Administration (GSA) has established various programs to satisfy agencies' requirements for FIP resources. Part 201-24 describes these programs and the extent to which their use or consideration is mandatory.

§ 201-20.203-1 Consideration of alternatives.

(a) Agencies shall—

(1) Conduct market research to determine the availability of technology to meet their requirements and to assist in identifying feasible alternatives;

(2) Use GSA's mandatory-for-use programs described in subpart 201-24.1 when their requirements can be met by these programs, unless they have requested and received an exception to the use of these programs from GSA;

(3) Use GSA's mandatory-for-consideration programs described in subpart 201-24.2 when their requirements can be met by those programs and using them is the most advantageous alternative to the Government;

(4) Consider using FIP resources available for reuse within the agency and from other agencies to satisfy their requirements;

(5) Consider using existing FIP resources on a shared basis to satisfy their requirements; and

(6) Consider acquiring FIP resources by contracting.

(b) Agencies should also consider using GSA nonmandatory programs to meet their requirements.

§ 201-20.203-2 Cost for each alternative.

(a) In the analysis of alternatives, agencies shall calculate the total estimated cost, using the present value of money, for each feasible alternative unless the anticipated cost of the acquisition is $50,000 or less. The total estimated cost for each alternative shall include system life cost for that alternative and any other costs, that can be identified with the alternative, incurred either before or after the system life period.

(b) When the anticipated cost of the acquisition is $50,000 or less, the total estimated cost may be limited to an analysis demonstrating that the benefits of the acquisition will outweigh the costs.

(c) Agencies shall follow guidance in OMB Circular No. A-94, "Discount Rates to be Used in Evaluating Time-Distributed Costs and Benefits," when calculating the cost of each alternative.

§ 201-20.203-3 [Reserved]

§ 201-20.203-4 Conversion.

(a) When evaluating alternatives, it is important for the Government to consider its investment in FIP resources that may have to be converted, replaced, or disposed of, as a result of the alternative selected. Therefore, as part of the analysis of alternatives, agencies shall consider the costs, risk, and magnitude of conversion from installed FIP resources to augmentation or replacement resources.

(b) To achieve the above, agencies shall perform a conversion study, commensurate with the size and complexity of the requirement, for all acquisitions of FIP resources, except for—

(1) Initial acquisitions where no FIP resources exist;

(2) Acquisitions of FIP equipment peripherals only; or

(3) The exercise of a purchase option under a leasing agreement.

(c) In determining conversion costs, agencies shall include any cost of conversion that can be stated in dollars, as well as other expenses directly related to the conversion. However, the costs associated with the following shall not be included:

(1) Conversion of existing FIP software and data bases that would be redesigned regardless of whether or not augmentation or replacement FIP resources are acquired.

(2) Purging duplicate or obsolete FIP software, data bases, and files.

(3) Development of documentation for existing FIP application software.

(4) Improvements in management and operating procedures.

(d) In performing a conversion study, agencies shall consider the guidance contained in FIRMR Bulletin C-14 on this subject.

§ 201-20.203-5 Obsolescence.

As part of the analysis of alternatives, agencies shall determine strategies for maintaining up-to-date FIP resources and avoiding outdated FIP resources over the system life.

Subpart 201-20.3—Implementation

§ 201-20.300 Scope of subpart.

This subpart prescribes the policies and procedures for implementing the most advantageous alternative selected as a result of the analysis of alternatives.

§ 201-20.301 General.

Implementation includes the activities in the acquisition phase, following the analysis of alternatives and selection of the most advantageous alternative, that are necessary to prepare the selected alternative for operation.

§ 201-20.302 Implementation plan.

(a) *Policy.* Agencies shall develop an implementation plan, commensurate with the size and complexity of the selected alternative, for implementing FIP resources.

(b) *Procedures.*

(1) The agency shall designate an individual to be responsible for executing each implementation plan.

(2) The plan shall describe tasks, responsibilities, resources, and schedules needed to ensure successful implementation.

§ 201-20.303 Standards.

(a) *Scope.* This section prescribes policies and procedures for the use of Federal Information Processing Standards (FIPS), Federal Telecommunications Standards (FED-STDS), interim standards, and agency-unique standards.

(b) *General.*

(1) GSA publishes a handbook titled "Federal ADP and Telecommunications Standards Index" that lists Federal standards. The index contains information about applicability for each standard and terminology for including standards in solicitations. Copies can be purchased from: U.S. Government Printing Office, Superintendent of Documents, Washington, DC 20402. FIRMR Bulletin C-3 contains additional information about the index.

(2) *Types of Federal standards—*

(i) Federal Information Processing Standards (FIPS).

(A) FIPS are automatic data processing

standards developed and issued by the National Institute of Standards and Technology (NIST) after approval by the Secretary of Commerce, as part of their Federal Information Processing Standards Publications (FIPS PUBS) series.

(B) Public Law 99-500 Title VIII, the "Paperwork Reduction Reauthorization Act of 1986," modified the definition of automatic data processing equipment (ADPE) to include most telecommunications equipment and services. Public Law 100-235, the "Computer Security Act of 1987," expressly provided the Secretary of Commerce authority for promulgating NIST developed Federal computer system standards, which were defined to encompass all ADPE standards. All such ADPE standards are called FIPS.

(ii) Federal Telecommunications Standards (FED-STDS).

(A) FED-STDS are official Federal Government publications relating to standards developed by the National Communications System under delegation from GSA. FED-STDS include those categories in the Federal Supply Class (FSC) of "Telecommunications" of the Federal Standards Program not redefined as ADPE by Public Law 99-500.

(B) FED-STDS relating to ADPE that were in existence when Public Law 99-500 was enacted are covered by the modified definition of ADPE in Public Law 99-500 and therefore fall under the authority of NIST. These standards were redesignated by NIST as FIPS.

(3) *Categories of Federal standards.*

(i) Hardware standards (FIPS).

(ii) Software standards (FIPS).

(iii) Application standards (FIPS).

(iv) Data standards (FIPS).

(v) Operations standards (FIPS).

(vi) Telecommunications standards (i.e., FED-STDS) including those FSC telecommunications items not redefined as ADPE by Public Law 99-500. These standards are developed by the National Communication System and managed by GSA.

(vii) Computer-related telecommunications standards including those FSC telecommunications items redefined as ADPE by Public Law 99-500. These standards are issued by NIST as FIPS.

(c) *Policies.*

(1) Technical and requirements personnel shall—

(i) Review each standard to determine its applicability to each requirement; and

(ii) Work with contracting officials to ensure that all applicable Federal standards are specified in any resulting solicitation.

(2) Agencies are encouraged to apply interim Federal standards when acquiring and using FIP resources. Agencies shall develop appropriate terminology for use in solicitations that is consistent with the intended use of the interim standard.

(3) When Federal standards do not exist for FIP resources being acquired, agencies should consider the use of voluntary standards, both domestic and international.

(4) In cases where no Federal, National, or International Standards exist, agencies shall consider the development and use of agency-unique standards, provided such use is not in violation of the full and open competition requirements of Public Law 98-369, Title VII, the "Competition in Contracting Act." The use of agency-unique standards shall be coordinated with NIST.

(5) The agency head may allow the use of alternate standards for the acquisition and use of computer security items. Such standards must be more stringent than the applicable Federal standards and contain, at a minimum, the functional provisions of the applicable Federal standard.

(d) *Procedures.*.

(1) *Waivers.* The Secretary of Commerce has delegated to the heads of executive departments and agencies, the authority to waive FIPS that are compulsory for agency use in the acquisition and management of FIP resources. Such waivers by agency heads shall be in accordance with the conditions and notification procedures specified by the Secretary of Commerce. If an individual FIPS is waived, a deviation from the FIRMR is not required.

(2) *Exceptions.* GSA may grant exceptions to the mandatory use of a FED-STD upon submission of adequate documentation from the requesting agency. If GSA grants an exception to the use of an individual FED-STD, a deviation from the FIRMR is not required. Requests for

exceptions should be addressed to: General Services Administration, Policy and Regulations Division, (KMP), 18th & F Streets, NW, Washington, DC 20405.

§ 201-20.304 Capability and performance validation.

(a) *Policy.* When acquiring FIP resources, agencies shall use the capability and performance validation techniques that the agency determines are necessary to ensure that requirements are satisfied.

(b) *Procedures.*

(1) When a benchmark is used as part of performance validation, agencies shall ensure that the FIP software selected for the benchmark is representative of actual requirements and requires the minimum amount of reprogramming or conversion.

(2) In determining the capability and performance validation techniques to be used, agencies should consider the guidance contained in FIRMR bulletins. (For complex acquisitions agencies should also consider the guidance in GSA handbooks.) The provisions of FIRMR bulletins and GSA handbooks are not mandatory for use by agencies.

§ 201-20.305 Delegation of GSA's exclusive procurement authority.

(a) *General.*

(1) GSA either authorizes agencies to contract for FIP resources under a delegation of GSA's exclusive procurement authority (DPA) or contracts for these resources on behalf of agencies. GSA authorizes agencies to contract for FIP resources by the following methods for granting a DPA:

(i) Regulatory delegations as provided by this section.

(ii) A specific agency delegation.

(iii) A specific acquisition delegation.

(2) The DPAs discussed in this section are given to the agency's DSO, when GSA determines that such officials are sufficiently independent of program responsibility and have sufficient experience, resources, and ability to fairly and effectively carry out procurements under GSA's authority as provided by 40 U.S.C. 759(b)(3).

(3) The agency's DSO may redelegate GSA's exclusive authorities for FIP resources to qualified officials.

(4) Such redelegation shall not relieve the agency's DSO of the responsibility for conduct of and accountability for acquisitions of FIP resources made under a DPA from GSA.

(b) *Policies..*

(1) Agencies shall procure FIP resources under GSA's exclusive procurement authority.

(2) Agencies shall not fragment requirements for FIP resources in order to circumvent established delegations of procurement authority thresholds.

(3) Agencies shall consider severing requirements for FIP resources from requirements for other resources and contracting for FIP resources under a delegation when—

(i) The requirement for FIP resources can be clearly identified and explicitly stated in a solicitation;

(ii) The technical and operational needs can be satisfied by severing requirements for FIP resources from requirements for other resources;

(iii) The items can be acquired by the Government and delivered to the contractor as required by the production schedule;

(iv) Adequate price competition can be achieved on the FIP resources portion of the requirements;

(v) The expected cost reduction will exceed the added costs of the additional acquisition by contracting;

(vi) Severing will not affect the contractor's ability and responsibility to perform as required by the contract; and

(vii) The estimated dollar value of FIP resources explicitly required by the agency in the solicitation exceeds the thresholds for regulatory delegations specified in § 201-20.305-1.

(4) GSA retains the right to revoke or suspend any delegation when GSA determines that circumstances warrant such action.

§ 201-20.305-1 Regulatory delegations.

The following regulatory delegations are hereby granted to agencies:

(a) Agencies may contract for the following FIP resources without prior approval of GSA:

(1) FIP equipment, software, services, and support services when the dollar value of any individual type resource including all optional quantities and periods over the life

of the contract, does not exceed $2,500,000 ($250,000 for a specific make and model specification or for requirements available from only one responsible source) and either paragraph (a)(1)(i), (a)(1)(ii), or (a)(1)(iii) following applies:

(i) The acquisition does not include telecommunications requirements within the scope of FTS2000 services or GSA's Consolidated Local Telecommunications Services Program; or requirements for telecommunications facilities or services at a location where the contract would result in more than one agency acquiring a telecommunications switching function at that location.

(ii) The agency has an exception to the use of FTS2000 services or GSA's Consolidated Local Telecommunications Services Program.

(iii) The acquisition includes telecommunications requirements within the scope of FTS2000 services or GSA's Consolidated Local Telecommunications Services Program, and the telecommunications facilities or services are acquired through the use of FTS2000 or GSA's Consolidated Local Telecommunications Services Program.

(2) FIP related supplies regardless of cost.

(3) Financial management systems software and services and support related to the implementation of such software through the use of the GSA Financial Management Systems Software (FMSS) mandatory multiple awards schedule (MAS) contracts program.

(b) When FIP equipment, software, services, and support services (or any combination thereof) are combined and acquired under a single contract action, a specific acquisition delegation shall be required when the dollar value of either the equipment, software, services, or support services exceeds the applicable dollar threshold in section 201-20.305-1(a)(1).

(c) Agencies may acquire telecommunications services through the use of FTS2000 or GSA's Consolidated Local Telecommunications Services Program without obtaining a DPA from GSA.

§ 201-20.305-2 Specific agency delegations.

The Commissioner, Information Resources Management Service, GSA, or a designee may authorize a DPA for FIP resources for individual agencies or their components that modifies the conditions of regulatory delegations. A specific agency DPA is based on the results of an Information Resources Procurement and Management Review conducted by GSA and on the agency's ability to acquire, manage, and use FIP resources in accordance with FIRMR policies and procedures.

§ 201-20.305-3 Specific acquisition delegations.

Agencies shall submit an agency procurement request (APR) to GSA and receive a specific acquisition DPA if the acquisition is not covered by a regulatory or specific agency DPA. Procedures for requesting a DPA for a specific acquisition are provided in FIRMR Bulletin C-5. A description of the Trail Boss program and procedures for requesting a specific acquisition DPA under the Trail Boss Program are provided in FIRMR Bulletin C-7. Participation in the Trail Boss Program is optional. However, a Trail Boss request shall be submitted in accordance with FIRMR Bulletin C-7.

§ 201-20.306 Delegation of GSA's multiyear contracting authority for telecommunications resources.

Executive agencies are authorized to enter into multiyear contracts for telecommunications resources subject to the following conditions:

(a) The agency shall have a delegation of GSA exclusive procurement authority for FIP resources.

(b) The contract life including options, shall not exceed 10 years.

(c) Agencies shall comply with OMB budget and accounting procedures relating to appropriated funds.

GENERAL SERVICES ADMINISTRATION
Washington, DC 20405

August 11, 1993

FIRMR BULLETIN C-9
Revision 1

TO: Heads of Federal agencies

SUBJECT: Nonmandatory General Services Administration (GSA) services and assistance programs.

1. Purpose. This bulletin describes nonmandatory GSA services and assistance programs available for use by Federal agencies.

2. Expiration date. This bulletin contains information of a continuing nature and will remain in effect until canceled.

3. Contents. This bulletin addresses the following topics:

4. Related material.

a. FIRMR Part 201-24--GSA Services and Assistance.
b. FIRMR Part 201-39--Acquisition of Federal Information Processing (FIP) Resources by Contracting.
c. FIRMR Bulletin C-7--Trail Boss Program.
d. FIRMR Bulletin C-8--Information Accessibility for Employees with Disabilities.
e. FIRMR Bulletin C-17--Information Resources Service Center (IRSC).

f. FIRMR Bulletin C-21--Purchase of Telecommunications Services (POTS) contracts.
g. FIRMR Bulletin C-25--Bid Analysis and Reporting System.
h. GSA publication "IRMS Directory of Assistance."

5. Information and assistance.

a. Additional information on the content of this bulletin may be obtained from:

General Services Administration
Regulations Analysis Division (KMR)
18th & F Streets, NW
Washington, DC 20405

Telephone: FTS/Commercial (202) 501-3194 (v) or
FTS/Commercial (202) 501-0657 (tdd)

b. GSA publishes the "IRMS Directory of Assistance" semiannually. Copies of the directory may be obtained by contacting:

General Services Administration
Agency Liaison Division (KML)
18th and F Streets, NW
Washington, DC 20405

Telephone: FTS/Commercial (202) 501-0819

6. Acronyms.

BARS	Bid Analysis and Reporting System
COCA	Clearinghouse on Computer Accommodation
FEDCAC	Federal Computer Acquisition Center
FEDSIM	Federal Systems Integration and Management Center
FIP	Federal Information Processing
FISSP	Federal Information Systems Support Program
IRM	Information Resources Management
IRMS	Information Resources Management Service
OTA	Office of Technical Assistance
POTS	Purchase of Telecommunications Services
TSC	Telecommunications Support Contract

7. Discussion. GSA offers many nonmandatory service and assistance programs and contracts to help agencies meet their IRM requirements. Agencies should consider these GSA offerings for meeting agency requirements for FIP resources and use them when the agency determines that doing so would be the most advantageous alternative. In addition, agencies should inform

GSA officials of their needs for new or revised GSA services and assistance programs. GSA will continue to develop and manage programs to satisfy requirements common to many agencies. A brief description of the nonmandatory programs and contracts that are currently available to agencies follows.

a. Office of Technical Assistance - OTA provides technical assistance and acquisition support to help Federal agencies improve the use of FIP resources. On a cost-reimbursement basis, OTA provides acquisition support and technical assistance in such areas as IRM planning; systems integration; networking; facility management; software conversion, improvement, engineering, development and maintenance; planning, designing, and testing of new systems; and system security. OTA sponsors and supports three separate and complementary programs that provide assistance to other agencies: the Federal Computer Acquisition Center (FEDCAC), the Federal Systems Integration and Management Center (FEDSIM), and the Federal Information Systems Support Program (FISSP). These programs are discussed below. For additional information about centralized OTA programs, contact OTA at:

General Services Administration
Office of Technical Assistance (KR)
5203 Leesburg Pike, Suite 400
Falls Church, Virginia 22041

Telephone: FTS/Commercial (703) 756-4100

(1) Federal Computer Acquisition Center - FEDCAC, located in Lexington, Massachusetts, competitively acquires large dollar value (i.e., life cycle cost greater than $100 million) hardware, systems software, and associated services such as maintenance, training, and systems analyst support for client agencies. FEDCAC helps agencies with requirements definition, development of specifications and contractual terms and conditions, preparation of technical and cost evaluation criteria, development of benchmarks and live test demonstrations, development of acquisition documentation including the complete request for proposals, and validation and evaluation of offeror proposals. FEDCAC has its own in-house technicians, cost analysts, project managers, lawyers, and contracting officers, to provide complete acquisition support. For more information, contact FEDCAC at FTS/Commercial (617) 863-0104.

(2) Federal Systems Integration and Management Center - FEDSIM, located in Falls Church, Virginia, delivers a wide range of services to clients world wide including support in the areas

of FIP resources acquisition, systems integration, software management, information technology facilities management, ADP security, disaster recovery services, office systems, local area network implementation, and networking. This support includes IRM planning, defining and documenting requirements, and designing, developing, acquiring, and managing automated information systems. FEDSIM provides this support with in-house Government experts and contractors from the private sector. FEDSIM has five client support Divisions: the Federal Systems Management Division, the Federal Systems Integration Division, the Federal Systems Acquisition Division, the Federal Office Systems Division, and the Federal Software Management Division. For more information, contact FEDSIM at FTS/Commercial (703) 756-6151.

(3) Federal Information Systems Support Program - FISSP, with offices coast to coast, provides Federal agencies technical, contractual, and administrative support in acquiring system definition, design, and requirements analysis services, business and scientific application systems support (development, maintenance, integration and conversion) services, computer security studies and risk analysis services, and facility management (including LAN management, the management as well as the operation of computer systems and networks, and data capture and retrieval) services through various contracts. Technical assistance in developing statements of work, project management and financial management is also provided. The requiring activity may place their requirement directly with GSA as GSA provides all necessary contracting support. A surcharge is assessed to agencies for use of these contracts. Agencies may obtain further information about the scope, availability, and terms of these contracts by contacting the appropriate FISSP office listed below:

- Program Office

  General Services Administration
  Office of Technical Assistance
  Federal Information Systems Support
  Division (KRT)
  5203 Leesburg Pike, Suite 501
  Falls Church, VA 22041-3467
  Telephone: FTS/Commercial (703) 756-4227

- Zone Offices

Eastern Zone - Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Puerto Rico, Rhode Island, Vermont, Virginia, Virgin Islands, West Virginia (Excludes the Washington, DC Metropolitan area)

The Wanamaker Building
100 Penn Square East, Suite 732
Philadelphia, PA 19107
Telephone: FTS/Commercial (215) 656-6300

Capital Zone - Washington, DC Metropolitan Area (Montgomery and Prince George's Counties, Maryland; Arlington, Fairfax, Loudon, and Prince William Counties, Virginia; and the Cities of Alexandria, Fairfax, and Falls Church, Virginia).

7th & D Streets, SW
Washington, DC 20407
Telephone: FTS/Commercial (202) 708-7700

Central Zone - Alabama, Florida, Georgia, Illinois, Indiana, Kentucky, Michigan, Minnesota, Mississippi, North Carolina, Ohio, South Carolina, Tennessee, Wisconsin.

5015 Bradford Drive, Suite 3
Huntsville, AL 35805
Telephone: FTS/Commercial (205) 895-5091

Western Zone - Arkansas, Colorado, Iowa, Kansas, Louisiana, Missouri, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, Wyoming.

819 Taylor Street
Fort Worth, TX 76102
Telephone: FTS/Commercial (817) 334-3686

Pacific Zone - Alaska, American Samoa, Arizona, California, Guam and the Marianas Islands, Hawaii, Idaho, Nevada, Oregon, Washington.

525 Market Street, 32nd Floor
San Francisco, CA 94105
Telephone: FTS/Commercial (415) 744-8527

b. GSA nonmandatory schedule contracts for FIP resources - A variety of FIP resources can be obtained through GSA nonmandatory ADP and telecommunications schedule contracts. FIRMR Part 201-39 provides policies and procedures regarding the use of these schedule contracts. FIRMR Bulletin C-17 provides assistance on how to obtain additional information about schedules through a GSA electronic bulletin board. The acquisition guide, "A Guide for Using GSA's Schedule Contracts for FIP Resources" explains how and when to use these contracts. Copies of the guide may be obtained from the Agency Liaison Division by calling telephone (202) 501-0819.

c. Purchase of Telecommunications Services Contracts - GSA has established nonmandatory POTS contracts to provide telecommunications supplies and services, including purchase, installation, maintenance, repair, de-installation, and relocation of both contractor-provided and Government-owned telephone equipment, at locations throughout the country. The POTS contracts are available for use by all Federal agencies. A surcharge is assessed to agencies for use of these contracts. Procedures for using the POTS contracts are contained in FIRMR Bulletin C-21. For more information on these contracts, contact:

General Services Administration
Technical Contract Management Division (KVT)
1730 M Street, NW, Suite 204
Washington, DC 20036

Telephone: FTS/Commercial (202) 606-9100

d. Federal Outreach Program - This program provides a number of services to keep the Federal IRM community informed and up-to-date on emerging issues and changes in IRM policy. The Outreach Program features a number of communication channels such as the IRM Newsletter, the GSA IRM Reference Center, Governmentwide mailings, and the training and education programs outlined below. For more information on the Outreach Program, contact:

General Services Administration
Agency Liaison Division (KML)
18th and F Streets, NW
Washington, DC 20405

Telephone: FTS/Commercial (202) 501-0819
Telefax: FTS/Commercial (202) 219-1533

(1) Training and Education

- The Trail Boss Program provides executive-level training seminars for senior managers and agency officials. Trail Boss I, geared for acquisition program managers, covers the acquisition of FIP resources, while Trail Boss II concentrates on the implementation of those systems. Trail Boss III, for senior contracting officers and their technical representatives, focuses on the contracting and legal issues involved in such acquisitions. FIRMR Bulletin C-7 discusses the Trail Boss Program.

- The 1,000 by the Year 2000 Program helps to develop future IRM managers and leaders through cooperative partnerships with the nation's universities. Federal IRM professionals can obtain an IRM certificate by taking a series of six graduate-level IRM courses. The program will also feature a graduate-level Federal IRM curriculum to be offered by major universities in Federal centers across the country.

(2) GSA IRM Reference Center - The IRM Reference Center, which is open to the public, contains a collection of over 300 publications from GSA, OMB, other Federal agencies, academia, and special trade associations pertaining to Federal IRM. The Center collects current IRM materials that include agency plans, reports, surveys, handbooks, studies, conference reports, policies, solicitation documents and Trail Boss Program materials. For more information on the Reference Center, or if you would like to contribute materials of interest to other agencies to the Reference Center, contact:

General Services Administration
IRMS Reference Center
18th & F Streets, NW, Room 1231
Washington, DC 20405

Telephone: FTS/Commercial (202) 501-4860

e. Clearinghouse on Computer Accommodation - COCA is a model demonstration and technical resource center that assists GSA and client agencies to establish automated information practices and services that meet statutory requirements to accommodate people with disabilities. COCA conducts agency consultations and workshops on IRM planning and managing for accessibility that address needs requirements, acquisition strategies, and service delivery. COCA's handbook, Managing Information Resources for Accessibility, is also available. FIRMR Bulletin C-8 provides additional information about COCA. For information, contact:

General Services Administration
Office of GSA Information Resources Management
Center on Computer Accommodation
18th & F Streets, NW, Room 1213
Washington, DC 20405

Telephone: FTS/Commercial (202) 501-4906 (v) or
FTS/Commercial (202) 501-2010 (tdd)

f. Contracting guidance and assistance - To assist Federal agencies in preparing solicitations for FIP resources, GSA makes the following materials available:

(1) Standard solicitation documents (SSDs) - GSA makes available four solicitation documents with clauses and provisions applicable to the acquisition of FIP resources as well as a guidance document to assist in the use of the solicitations. Separate solicitation documents for systems, software, equipment, and maintenance are available. The SSDs are provided in printed copy as well as on the GSA CD-ROM and word processing diskettes which are available from the Government Printing Office. For information, contact:

General Services Administration
Regulations Analysis Division (KMR)
18th and F Streets, NW
Washington, DC 20405

Telephone: FTS/Commercial (202) 501-3194

(2) Sample solicitation for Individual Systems Procurements (ISP) - This is a copy of a Request for Proposals, including the specifications, used by GSA, for acquiring digital voice and data local telecommunications service or equipment. For information, contact:

General Services Administration
Special Projects Procurement Branch (KELS)
18th and F Streets, NW
Washington, DC 20405

Telephone: FTS/Commercial (202) 501-1076

(3) Bid Analysis and Reporting System - To help Federal agencies evaluate vendor offers made in response to solicitations for FIP resources, GSA makes BARS available. BARS is a computerized evaluation tool that agencies may use to conduct a present value cost/price analysis. FIRMR Bulletin C-25 provides additional information about BARS for use on personal computers. For information, contact:

General Services Administration
Economic Analysis Branch (KELE)
18th and F Streets, NW
Washington, DC 20405

Telephone: FTS/Commercial (202) 501-1098

g. Tariff interpretation, representation and negotiation - GSA, on behalf of executive agencies, will participate in negotiations with regulated telecommunications carriers, and where circumstances warrant, will institute action before Federal and state regulatory bodies to contest the level, structure, or applicability of rates or service terms. GSA will provide information on tariff rates for telecommunications services including tariff interpretation and application. For information contact:

General Services Administration
Economic Analysis Branch (KELE)
18th and F Streets, NW
Washington, DC 20405

Telephone: FTS/Commercial (202) 501-1098

h. Telecommunications Support Contracts - GSA, through its Telecommunications Support Contracts (TSC) can provide Federal agencies with access to expertise in voice/data/video systems analysis, systems integration, network engineering and design, requirements analysis, specification development, system testing and acceptance, strategic and tactical planning and other related services. Technical assistance in developing statements of work, project management and financial management is also provided. The requiring activity may place their requirement directly with GSA as GSA provides all necessary contracting support. A surcharge is assessed to agencies for use of these contracts. For additional information on the TSC, contact:

(1) Eastern Zone - Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Puerto Rico, Rhode Island, Vermont, Virginia, Virgin Islands, West Virginia.

100 Penn Square East
Wanamaker Building
Philadelphia, PA 19107

Telephone: FTS/Commercial (215) 656-6349

Telephone: FTS/Commercial (215) 656-6349

(2) Capital Zone - Washington, DC metropolitan area.

7th and D Streets, SW
Washington, DC 20407

Telephone: FTS/Commercial (202) 708-8000

(3) Central Zone - Alabama, Florida, Georgia, Illinois, Indiana, Kentucky, Michigan, Mississippi, Minnesota, North Carolina, Ohio, South Carolina, Tennessee, Wisconsin.

401 West Peachtree Street
Suite 2700
Atlanta, GA 30365-2550

Telephone: FTS/Commercial (404) 331-1777

(4) Western Zone - Arkansas, Colorado, Iowa, Kansas, Louisiana, Missouri, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, Wyoming.

819 Taylor Street
Fort Worth, TX 76102

Telephone: FTS/Commercial (817) 334-3882 or
FTS/Commercial (817) 334-8430

(5) Pacific Zone - Alaska, American Samoa, Arizona, California, Hawaii, Idaho, Nevada, Oregon, Washington.

525 Market Street
San Francisco, CA 94105

Telephone: FTS/Commercial (415) 744-8250

8. Cancellation. FIRMR Bulletin C-9 is canceled.

for Thomas A. McDonough
Commissioner (K)
Information Resources
Management Service

GENERAL SERVICES ADMINISTRATION
Washington, DC 20405

November 19, 1993

FIRMR BULLETIN C-27
Revision 2

TO: Heads of Federal Agencies

SUBJECT: Reuse of Outdated Federal Information Processing (FIP) Equipment

1. Purpose. This bulletin provides a listing of outdated FIP equipment and guidelines for determining whether FIP equipment is obsolescent.

2. Expiration date. This bulletin contains information of a continuing nature and will remain in effect until canceled or superseded.

3. Contents.

4. Related material.

FIRMR Subpart 201-22.3 -- Obsolescence Review.
FIRMR Part 201-23 -- Disposition.
FIRMR Subpart 201-20.2 -- Analysis of Alternatives.
FIRMR Bulletin C-2 -- Disposition and reuse of FIP equipment.
FIRMR Bulletin C-29 -- Acquisition of used computer equipment by the Federal Government.

5. Information and assistance.

General Services Administration
Regulations Analysis Division (KMR)
18th and F Streets, NW.
Washington, DC 20405

Telephone FTS/commercial (202) 501-3194 (v), or
FTS/commercial (202) 501-0657 (tdd).

6. Definitions.

"Outdated FIP equipment" means any FIP equipment over eight years old, based on the initial commercial installation date of that model of equipment, and that is no longer in current production.

7. Acronyms.

ADP	Automatic Data Processing
FIP	Federal information processing
OEM	Original equipment manufacturer
SF	Standard Form

8. Background. GSA manages a Governmentwide FIP equipment reuse program to encourage the reuse of economically viable FIP equipment and to discourage the use of outdated FIP equipment. Outdated FIP equipment should not be reused within the Federal Government unless an analysis is conducted in accordance with FIRMR § 201-20.2 that shows reuse of the outdated equipment will be the most advantageous alternative for satisfying a FIP requirement. Although outdated FIP equipment may help solve a short term problem, it tends to perpetuate costly information processing solutions. When reported by agencies as excess, outdated FIP equipment is ordinarily removed from the Federal inventory for disposal as surplus equipment.

9. Guidelines for determining obsolescence.

a. Outdated FIP equipment may be characterized by one or more of the following factors:

(1) The maintenance services or replacement parts for maintaining standard performance of the computer or telecommunications equipment are no longer commercially available from traditional sources, including the original equipment manufacturer (OEM);

(2) The operating system of the FIP equipment is no longer supported by the OEM;

(3) Records indicate a degradation in the reliability of the equipment and show adverse effects on the supported mission;

(4) An increasingly higher portion of the overall operating costs is being applied towards the maintenance of the FIP equipment;

(5) The energy consumption, including necessary environmental control, is relatively high;

(6) The FIP equipment is not compatible with recent and more cost-effective software enhancements, such as automatic documentation, data dictionaries, coding optimizers, and extensive software libraries, new data structures, and new communications software; or

(7) The FIP equipment is not compatible with recent more cost-effective hardware enhancements and newer technology such as newer model storage units, tape drives, and controllers.

b. If one or more of the above factors applies to FIP equipment, an obsolescence review should be performed on the equipment, in accordance with FIRMR section 201-22.3, to determine whether cost savings are obtainable with newer technology.

10. Agency action. Agencies should include the notation "Outdated FIP equipment" for all equipment meeting that definition when reporting excess or exchange/sale equipment to GSA on the SF 120.

11. GSA action. GSA periodically updates a listing of outdated FIP equipment to be used in agency analyses for obsolescence. Attachment A contains the listing of specific make and model FIP equipment with original acquisition costs above $100,000 identified by GSA as being outdated at the end of fiscal year 1993. The list does not cover FIP equipment with lower acquisition costs because the applied technology changes at a more rapid rate and product life cycles are frequently much shorter. Agencies should consider this when examining FIP equipment for obsolescence using the factors mentioned above.

12. Submission of comments. GSA welcomes suggestions and comments for updating Attachment A. Comments, including substantiating data, should be sent to:

General Services Administration (KMR)
18th and F Streets, NW.
Washington, DC 20405

13. Cancellation. FIRMR Bulletin C-27 Revision 1 is canceled.

JOE M. THOMPSON
Commissioner
Information Resources
Management Service

OUTDATED FIP EQUIPMENT

MFR	SYSTEM DESIGNATION
ALL	FX/4,8
AMD	470 V5-II
	470 V6-II
	470 V7A,B,C
	470 V/8
	5840/50/60/67/68/70/80
	VP1100
AMP	8MS/86-DIFFERENCE SE
ANA	APL MACHINE
ARI	1000,900 Series
ATV	J300
AUG	C5330
AUS	ZEUS 2
BBN	BUTTERFLY, GP-1000
BMA	XM
BTI	8000
BUL	DPS 4,6/40,6/45,6/45-1,6/43,47,48
	DPS 6/53,6/57,6/75
	DPS 6/92,95,96
	DPS 7
	DPS 8/52,62,70
	DPS 88/41,42Dual,81,82, 82T
	DPS 90/91,92,93,94
	G 200
	G 6050/60/70/80
	HLEVEL62,64
	H 64/300
	H 66/05/07/10/17/20/27
	H 66/40/60/80/440, 520/DPS,BC
	H 68/DPS
	H 1200
	H 2020/30/40/50/60 6/06,23,30,33,34,36
	MICRO 6/20
CAL	UNISTAR 200,300
CAM	1636-1,10
	1641,-11
	1651,-12
CAN	LSI 2/10, 20, 40, 60
	LSI 4/10; 30, 90, 95
	NM 4/22, 85
	OMNIX 3
	SCOUT NM 4/04, 08
CDC	CYBER 76
	CYBER 170-720,730, 750, 815,825,
	CYBER 173, 175, 176
	CYBER 180-810, 810A
	CYBER 180-835, 845
	CYBER 180-855
	CYBER 205
	1700/SYSTEM 17
	180-850/850A
	180-860/860A/870A
	180-990/990E/995E
	31/3150
	3200
	3300
	3500
	7600
CEN	Series 700
CHI	2130C
CHL	68 Series
CHL	Universe/400
CLM	SUN-BEAM
	SUNSHINE 60
COM	M6
CON	3205/5A
	3210,10A,12,12A,20 50,55
	3230,40,50
	6/16
	7/16,7/32
	70
	8/32
	CADAM
	MC 5500 FAMILY
	SERIES 16
COR	2000
	3000
	5000
	5012V,D
	C-5000 2A
	C-5001/MU
	C-8001/MU
CPL	8200
CRD	32/4
CRO	SYSTEM 100
CRY	1S,2
	FPS M SERIES
	XMP/11,12,14,18,SE
	XMP/22,24,28,216
	XMP/4
CYB	UNITE SERIES
DCS	DCS-86,80
DDA	INSIGHT, ELS SYSTEM
	SERIES 8000
DEC	1040/50/60/70/80/90
	2020/40/50/60
	PDP-8/a,e,f,i,l,m,s
	PDP-9,9L
	PDP 11/03,04,05,10,11 SV 15,24,34,35,40,44,45, 50,55,60
	PDP-11/70
	PDP-12
	PDP-15 XVM
	VAX 11/725,730,750,780, 782,785
	8600,8650
DEN	HEP
DGC	DESKTOP GENERATION 2
	DESKTOP GENERATION 3
	ECLIPSE C/150
	ECLIPSE C/300,330,350
	ECLIPSE S/100,120,130,140
	ECLIPSE S/200,230, 250,280
	MICRONOVA SYSTEM
	MP 100,200 MPT 100
	M/600
	MV/4000,6000,8000
	MV/10000 SERIES
	NOVA 1200 SERIES
	NOVA 2 SERIES
	NOVA 3/4,12,D
	NOVA 4/C,S,X
	NOVA 800/820
	NOVA 830/840
	S 20
DIA	3200
DIG	WORKFORCE SERIES
DMA	1620,1624,20P,30P
DPT	3200,6600,8400
	8600,8625,8636,8649
	8800,8850
DSC	83/20,80,500
DTC	TASK MASTER
DVU	4000 SERIES
DYN	5400,5505,5605
	5710, 6000 SERIES
DYT	SYSTEM 300
ELI	CONSULTANT
ELX	6420
ENC	CONCEPT 32/27,37,67,75 77,87,97
	PN 6000,9000
EVO	240,260,280
FOR	F/4000
FUJ	M 140,150
	M 320,340,360
	VP SERIES
FWD	GATEWAY 500,3000
GEN	CIE 680/40
	SPC-16
	ZEBRA 5500
	16/110,220,230,240
	16/330,340,440,460
	16/550
	18/30
	470,480
	750
	930,940,950
	1500
	2500,3500
GLO	M80/3,4
	M80/20
	M80/30
	M80/31
	M80/43
	USX 40,43,44,46
GNR	BA/500
	BA/800L
	BA/800W
GSM	8000 SERIES
HAR	1640,50,60,70
	H60,H80,H100,H300
	H500,H700,H800,H1000
	MIND
	SERIES 100,1X5,200,5X0
	SLASH 5,6
HDS	AS/3,5,3000,5000,6100, 6620,6630,6650,6660, 7000,8023,8040,8043, 8053,8060,8063AP,8083 9000,9040,9050 9060,9070,AP 9080,AP
HEU	MINIBOX
	MLZ-814
HIT	240
HPC	250,300
	3000-30,33,42
	1000-A/600
	1000-A/700
	1000-A/900
	1000-E (MX-E)
	1000-F
	1000-L, XL
	1000-M (MX-M,K)
	2100A
	2100S
	2114/15/16
	3000 I,II,III
	3000-44,48,52,58,64,68
	9000 SERIES 500
	9020,9030,9040
IAC	MULTIUSER 16
IBM	360/20,22,25, 30,40,50,65
	370/115,125,135,138 148,155,158 165,168
	1130,1401,1440
	3031,3032,3033 UAM
	3033N, 3033S
	3081D,G,K
	3083B,E,J,C
	3084
	4321,4331-1
	4331-2/11
	4341-1/2/9/10
	4341-2/11/12
	4361-3,-4,-5
	4381 SERIES
	8100
	SERIES 1
	SERIES 3-10
	SERIES 3-12
	SERIES 3-15
	SERIES 3-4
	SERIES 3-6
	SERIES 3-8
	SYSTEM/32,34,36 (Model 536)
	SYSTEM/38 SERIES
	POWER 6/32EX,X,MP

FIRMR Bulletin C-27
Revision 2
Attachment A

MGR	SYSTEM DESIGNATION
ICL	4443
	DRS 20,RSS 2000
	POWER 5/30
	SYSTEM 25
IDB	BETASYSTEM 2
	ULTRAFRAME
IMP	CPU-16/100, 200
INF	CC2
INT	310 SERIES
	380,380X
	FIND6
IPL	4443,4445,4446,4460
	4480
ITB	CADET
	HIGH PERF. MIDI CADET
	MIDI CADET
	SUPER CADET
ITM	IN/7000K,M
JCS	JCS 510 SERIES
	JCS 807 SERIES
	JCS 810 SERIES
KEY	200 SERIES
LBM	ADAM SERIES
	GOLIATH
	TINA
LGM	SYSTEM ONE,TWO,THREE
MAC	SD 610,700
MAI	110,200,210,310,350,400,
	410,510,600,610,700,710,
	730,810,1600
MAT	22
MCD	1600
	4000 SERIES
	7000 SERIES
MCD	9000 SERIES
MCS	CLASSIC 32/85,87
	CLASSIC 7870
	CLASSIC II/75
	MODCOMP IV
MEM	RDS 500
MET	METAPHOR
MIC	440,460
MIZ	VME MATRIX 68K
MOD	CLASSIC 7810-4,7820,7830,
	7840,7860,II/15,II/25,
	II/45,MODCOMP I & II,
MOL	F85, 900 SERIES
	POPPY II SERIES
	SUPERMICRO SERIES
MOM	21/20,40,50,60,70
	SUPER 21
MOT	2000 SERIES,
	5000 SERIES,
	6000 SERIES,
	Classic II/75
	CDX 68-24,44
	ModComp IV
	IV/40-IV/95, SERIES 4
	SYSTEM 311,312
	TWO PI V/32
MYL	3000 SERIES
NAB	1600
NAT	VOYAGER
NBI	SYSTEM 8,64
NCR	8130,40,50
	8200,30/31,50/51
	8270
	8350
	8410,30,50,55
	8535 II,45 II,50,55,55 II
	8560,65,65 II,70,75,75 II
	8580,85,85 II,8595 II,
	8635,45,50,55
	8665,75,85,95
	8835,45,55
	8865,67
	9010,20,40,50
	9300
	AT&T 3B2/300,310,400
	AT&T 3B20
	AT&T 3B5/15
	CENTURY 75,100,101,151
	CENTURY 200,251,300
	I TOWER,TOWER XP,1632
NEC	200,210,230,250,270
	ASTRA 220
NNC	53,520,540
	80,80W,820,825,M20,M40
NOH	RELIANT COMPUTER I, II
NOR	ND 100 COMPACT
	ND 500 SERIES
NOV	68B
NRS	DIMENSION SERIES
NTC	565,585
PER	PERQ
PIV	TRICEP
PLX	P/25,35,40,60
PLY	301C/POLYETTE
	903A
	ARDENT A305
PRM	100,150,150II,200,
	250,250II,300,350,400,
	450,450II,500,550,
	550II,650,750,850
	2250,2550,9650,9750
	9950
PRO	PROPHET 21/3,4
PT4	MARK 2,3,5,9
PYR	90X
QAN	10 SERIES
	20 SERIES
	40 SERIES
	64 SERIES
	200 SERIES
	300 SERIES
Q1C	68000,MICROLITE
RAD	TRS 16
REX	RX 15,20,30,50
	RX 100,200,400,450
RUB	ASSOCIATE
SAM	MICROSTAR I,II SERIES
	1000E, 1050
SCI	32:16 SERIES
SCN	3000
	PCC 2000
	SABRE SERIES
	SERIES 3200
	XL 20, 40
SEN	SENTINEL SERIES
SHB	SERVER 500, 700
SIE	8850 SERIES
	8870 FAMILY
	8890 SERIES
SIN	SYSTEM 10
SMS	SMS 1000-40
STA	MI SERIES
	MICRO*STAR
	MINI*STAR
	MINI*STAR 400/1200
	NANO*STAR
STR	FT 200, 240, 250
	XA 400, 420, 440, 600
SWS	X-12+
SYN	N+1
TAN	NONSTOP I, II
	TXP
TEL	PM/16, 116T, /16T-85
	TS 804
TER	DBC/1012 MODEL 2
TLX	RDS 550
TOL	P100
TWI	TW-800
TXI	200,300,600,800
	990/4,5,10,12
UNI	B 24,25,26,80,90
	B 200/300/500/700
	B 800/900
	B 1720
	B 1815/25/30
	B 1855/60/70/85
	B 1905
	B 1955/1985/1990
	B 2500,2700,2800
	B 2900,2925,3500
	B 3700,3800,3955
	B 45/4700,4800
	B 4925,4955
	B 55/5700,5920,5930
	B 6800,6900,6925,7700
	B 7800,7900 FHK
	B A3-D,A3-F
	B A9-F
	C MEGAFRAME
	C MINIFRAME
UNI	C NGEN-80186
	S 80-3-4
	S 80-5-6
	S 90/25,30,40,60,70,80
	S 220
	S 418 I,II
	S 620i
	S 620/L+100C
	S 620/L-100
	S 1100/10/40
	S 1100/60/70/71/80
	S 1100/81/82/83/84/90
	S 1106/1108/1110
	S 9200
	S 9300
	S 9400/80
	S 9700
	S BC-7
	S MAPPER 5
	S MAPPER 10,SYSTEM 1
	S SPECTRA 70/45
	S SYSTEM 80-8
	S UTS 4020,4040
	S V-72,73,75,76
	S V-77-200,400,500,600
	S V-77-700,800
VEC	VECTOR 5 SERIES
	VECTOR MX SERIES
VER	20/2,4,22,24
	3400 SERIES
	40/4,44
	ATS 16,32,64
	CAT I,II,III
	SYSTEM 20,40,1000
VIA	816 SERIES
VIC	FACTOR
WAN	2200
	2200 SVP,LVP,VP
	VS 15,25,45,50,80,85
	VS 90,100
WIC	SYSTEM 150-3,6,155,
	200,220
WOR	WPS-SUPER 32
XEP	80 SUPERMICRO
	100/AP
XER	530,550,560
	SIGMA 5,7,9
ZAX	THE BOX
ZIL	8000
	SYSTEM 8000 SERIES 1
	SYSTEM 8000 SERIES 2

MANUFACTURER/DESIGNATION ABBREVIATION CODES

Code	MFR/Designation Name
ACE	Acer/Altos
ACT	Action Computers
ALL	Alliant Computer Systems
ALP	Alpha Microsystems
AMD	Amdahl
AMP	Ampex
ANA	Analogic Corporation
ARI	Arix
ATV	ATV Systems
AUG	August Systems
AUS	Austin Microsystems
BBN	BBN Computer Corporation
BTI	BTI
BMA	Bull Micral of America
BUL	Groupe Bull
CAL	Callan Data Systems
CAN	Computer Automation
CAM	Cambex
CDC	Control Data Corporation
CEN	Centurian Computer Corporation
CHI	Computer Hardware Incorporated
CHL	Charles River Data Systems
CLM	Climax Computer
CMP	Compal
COM	Comark Corporation
CON	Concurrent Computer
COR	Corvus Systems
CPL	Compal
CRD	Custom Research & Development
CRO	Cromemco
CRY	Cray Research
CYB	CYB Systems
DCS	Distributed Computer Systems
DDA	Display Data
DEC	Digital Equipment Corporation
DEN	Denelcor
DGC	Data General Corporation
DIA	Diablo Systems Incorporated
DIG	Digital Datacom
DMA	DataMedia
DPT	Datapoint
DSC	Dual System Control
DTC	DTC
DVU	Datavue
DYN	Dynabyte (Zentec)
DYT	Dynatech Computer Systems
ELI	Elite Corporation
ELX	Elxsi
ENC	Encore Computer
EVO	Evolution Computer
FOR	Formation
FUJ	Fujitsu
FWD	Forward Technology
GEN	General Automation
GLO	Global U.S.I.
GNR	General Robotics
GSM	General Systems Marketing
HAR	Harris
HDS	Hitachi Data Systems
HEU	Heurikon
HIT	Hitachi Limited
HPC	Hewlett-Packard Corporation
IAC	Inner Access Corporation
IBM	International Business
PLX	Plexus Computer
PLY	PolyComputers
PRM	Prime
PRO	Prophet 21, Incorporated
PT4	Point 4 Data
PYR	Pyramid Technology Corporation
QAN	Qantel
Q1C	Q1 Corporation
RAD	Tandy/Radio Shack
REX	Rexon Business Machines
SAM	Samsung
SCI	SCI Systems
SCN	Scan Optics
SEN	Sentinal Computer
RUB	Rubicon Systems Machines
ICL	ICL
IDB	Independent Business
INF	Infotecs
INT	Intel
IPL	IPL
ITB	Integrated Business
ITM	Intellimac
JCS	J C Systems
KEY	Keydata
LBM	Logical Business Machines
LGM	Logical Microcomputers
MAC	Macro-Tech
MAI	MAI Systems Corporation
MAT	Matra Datavision
MCD	McDonnell Douglas Corporation
MCS	Modular Computer Systems
MEM	Memorex-Telex
MET	Metaphor Computer Systems
MIC	Microsource Computer
MIZ	Mizar, Inc.
MOD	Modular Computer Systems
MOL	Molecular Computers
MOM	Momentum Systems Limited
MOT	Motorola Computer Systems
MYL	Mylee Digital Science
NAB	Nabu
NAT	National Computers
NBI	NBI
NCR	National Cash Register
NEC	NEC Technologies, Inc.
NNC	NNC Electronics
NOH	Nohalt
NOR	Norsk Data

MANUFACTURER/DESIGNATION ABBREVIATION CODES

Code	MFR/Designation Name	Code	MFR/Designation Name	Code	MFR/Designation Na
NSC	North Star Computers				
NOV	Novelle Systems				
NTC	Northern Telecom				
PER	Perq Systems				
PIV	Pivot Computer				
SHB	Sharebase Corporation				
SIE	Siemens Nixdorf				
SIN	Singer (ICL)				
SMS	SMS Technologies, Incorporated				
STA	Star Technology				
STR	Stratus Computer				
SWS	Southwest Technical				
STR	Star Technology				
SYN	Synapse				
TAN	Tandem				
TEL	Televideo				
TER	Teradata				
TLX	Telex Computer Products				
TOL	Tolerant Software				
TXI	Texas Instruments				
TWI	Thoughtworks Incorporated				
UNI	Unisys				
VEC	Vector Graphics				
VER	Versyss, Incorporated				
VIA	Viasyn Corporation				
VIC	Victory Computer				
WAN	Wang				
WIC	Wicat				
WOR	Workstations Product				
XEP	Xepix Incorporated				
XER	Xerox				
ZAX	Zax Corporation				
ZIL	Zilog				

GENERAL SERVICES ADMINISTRATION
Washington, DC 20405

November 19, 1993

FIRMR BULLETIN C-35

TO: Heads of Federal agencies

SUBJECT: Energy-efficient microcomputers and associated computer equipment

1. Purpose. This bulletin describes procedures that will promote energy-efficiency in the acquisition, management, and use of microcomputers and associated computer equipment.

2. Expiration date. This bulletin contains information of a continuing nature and will remain in effect until canceled or superseded.

3. Contents.

4. Related material.

The Energy Policy Act of 1992 (Public Law 102-486), October 5, 1992.

Executive Order 12759, Federal Energy Management, April 17, 1991.

Executive Order 12845, Requiring Agencies To Purchase Energy Efficient Computer Equipment, April 21, 1993.

Office of Management and Budget Office of Federal Procurement

Policy Letter 92-4, Procurement of Environmentally-Sound and Energy-Efficient Products and Services, November 7, 1992.

Federal Acquisition Regulation (FAR), Subpart 23.2, Energy Conservation.

FIRMR Part 201.20, Acquisition.

GSA Guidelines on the Acquisition, Management, and Use of Energy-Efficient Microcomputers, July 1993.

President's Policy on Technology for America's Economic Growth, February 22, 1993.

5. Information and assistance. Additional information on the content of this bulletin may be obtained from:

General Services Administration
Regulations Analysis Division (KMR)
18th and F Streets, NW
Washington, DC 20405

Telephone: FTS/Commercial (202) 501-3194 (v) or
FTS/Commercial (202) 501-0657 (tdd).

6. Definitions.

"Energy-efficient computer equipment" means computer equipment that provides equivalent or better performance and value to users, but uses significantly less energy than competing models.

"Energy Star Computer" means a microcomputer configuration which would qualify under the terms and conditions of the EPA Energy Star memorandum of understanding.

"Power management" means a hardware or software function in which equipment monitors its operation and automatically takes steps to reduce to lower power consumption depending on operating modes.

"Significant cost differential" means the additional costs incurred by purchasing Energy Star microcomputer equipment are greater than the calculated total energy savings costs over the life cycle of the microcomputer equipment.

"Sleep mode" (also called "suspend" or "standby" mode or other similar term) means a lower level power consumption mode than the normal operating mode, that equipment automatically switches to after a designated period of time. The lower level power mode terminology and actual power use will vary with the product, and some products may have more than one low power state.

7. Acronyms.

CRT	Cathode ray tube
DOE	Department of Energy
EPA	Environmental Protection Agency
FAR	Federal Acquisition Regulation
FIP	Federal information processing
kwh/yr	Kilowatt hours per year
LAN	Local area network
LCD	Liquid Crystal Display
MAS	Multiple Award Schedule
OMB	Office of Management and Budget

8. Background.

a. The Federal Government currently has an inventory of roughly two million microcomputers. These microcomputers and their associated equipment account for the highest increase in energy usage in Federal buildings in recent years. Some of this increase is unnecessary. Research indicates that approximately 33% of the nation's microcomputers are left "on" at night and through the weekend.

b. Both the President and Congress have recognized the need for Federal agencies to control their use of energy resources. As an example, the Energy Policy Act of 1992 now requires Federal agencies to reduce energy consumption to 20% below 1985 levels by the year 2000. The Energy Policy Act of 1992 also directs that GSA, along with the Department of Defense and the Defense Logistics Agency initiate a "program to include energy-efficient products in carrying out their procurement and supply functions." Executive Order 12845 requires that Federal agencies procure microcomputer equipment that meets the EPA Energy Star Computers Program requirements for energy-efficiency.

c. Advances in technology have made it possible to dramatically reduce computer related energy use. Power management features have been available in notebook computers for several years and are now also available in desktop models. Although these features differ among various vendors' products, they all save energy. In some cases, energy-efficient microcomputers and associated computer equipment have other advantages such as reducing machine fan noise and heat emitted by these machines.

d. Widespread Federal agency use of power management or energy-efficient features will create other benefits such as reducing Federal Government energy costs; decreasing air pollution caused by utility power generation; and easing the burden on building air conditioning and electrical systems.

9. Energy Star requirements under Executive Order 12845.

a. EPA's Energy Star Computers Program promotes the development of energy-efficient microcomputers, monitors, and printers and the reduction of air pollution caused by power generation. Manufacturers who meet the Energy Star requirements can designate their products as Energy star compliant and use the EPA Energy Star logo. Computer products can be Energy Star qualifying without having a "logo" on the computer equipment.

b. To qualify for the EPA Energy Star, microcomputers and monitors must be able to power down to and recover from a low-power state of 30 watts or less when inactive (or 60 watts when the monitor is included in the computer casing and is not powered directly from the wall outlet). Printers must be able to power down and recover from a low-power state of 30-45 watts, depending on the print speed. Many companies expect to convert a majority of their product lines to meet the EPA Energy Star requirements within the next several years. Energy Star products must meet EPA requirements when they are shipped (i.e. delivered) to the agency. For more information on participating companies, contact the EPA Energy Star Computers program office at (202) 233-9114.

10. GSA responsibilities for energy efficiency.

a. Established to implement the Energy Policy Act of 1992, GSA's Governmentwide program on energy efficiency will:

(1) Issue Governmentwide guidance on energy efficiency for FIP resources.

(2) Assist agencies to determine the commercial availability of energy efficient computer equipment when requested.

(3) Coordinate the FIP energy-efficient policies and programs of the various GSA organizations.

(4) Provide special training sessions on the procurement of energy-efficient computer equipment in Governmentwide forums and conferences and generally promote awareness of energy efficiency through the Trail Boss Program.

(5) Identify and promote energy-efficient microcomputers and computer equipment by:

(i) Incorporating in future solicitations of the non-mandatory MAS Program for FIP resources, provisions for

inclusion of Energy Star qualifying products. The Energy Star logo or another appropriate symbol will identify the product. The MAS electronic bulletin board will also be modified to make it easy to identify and select Energy Star qualifying equipment.

(ii) Working with Federal agencies to modify in-place computer contracts to include energy-efficient models, when appropriate.

(iii) Assisting EPA in promoting their Energy Star Computers Program to the vendor community.

(6) Work with DOE and other Federal agencies to develop ways to track the implementation of energy efficient policies and the performance of FIP energy efficient equipment. GSA will also assist in disseminating information from DOE's voluntary energy performance testing program to the Federal community.

b. GSA will prepare a consolidated annual report for the President as required by Executive Order 12845. The report will include a compilation of all agency acquisitions that were reported to GSA as being exempted from the requirements of this Executive Order. The first annual report will be submitted to the President by December 31, 1994.

11. Agency responsibilities for energy efficiency.

a. In accordance with Executive Order 12845, agency officials must take the following actions:

(1) Ensure that all new contracting actions or awards for microcomputers, monitors and printers issued after October 18, 1993, contain specifications that meet "EPA Energy Star" requirements for energy efficiency.

(2) Require that microcomputers, monitors and printers be equipped with or meet the energy-efficient low-power standby feature as defined by the EPA Energy Star program unless the equipment always meets EPA Energy Star efficiency levels. This low-power feature must be activated when the computer equipment is delivered to the agency and must be capable of entering and recovering from the low-power state unless the equipment meets the EPA Energy Star requirements at all times.

(3) Include to the extent possible, practical, and permitted by law, specifications that meet the above Energy Star requirements in amendments to existing solicitations or modifications to existing contracts.

(4) Include information about the economic and environmental benefits of the energy efficient low-power standby feature in routine computer training classes.

(5) As required, grant on a case-by-case basis, exemptions to the EPA Energy Star requirements for acquisitions based upon the commercial availability of qualifying equipment, the significant cost differential of the equipment, the agency's performance requirements, or the agency's mission. These exemptions must be signed by the agency head or designee. Agencies shall periodically review their exemptions with the intent of bringing all purchases into compliance with Energy Star qualifying products.

b. Agencies must include requirements for energy efficiency in their requirements analyses in accordance with FIRMR Part 201-20. The guidance found in paragraph 12 below and in Attachment A should be used in developing requirements.

c. Beginning in 1994, agencies must report to GSA annually, by October 18, all the acquisitions, for the fiscal year ending September 30, that were exempted from the requirements of Executive Order 12845. Agencies that do not grant any exemptions must submit negative reports. The Interagency Report Control Number for the EPA Energy Star Exemption Report is 0412-GSA-AN. A sample report format is shown in Attachment C. Reports should be sent to:

General Services Administration
Information Resources Management Service
Acquisition Reviews Division (KMA)
18th and F Streets, NW
Washington, DC 20405

Telephone: FTS/Commercial (202) 501-1126

d. Agency policies and procedures should reflect Government wide requirements to include energy-saving features in new computer acquisitions where practical and where products are commercially available.

e. Section 3021 of the Energy Policy Act of 1992 requires affected agencies, to the extent practical, to award at least 10 percent of the amount obligated for competitively awarded contracts and subcontracts under the Act to small disadvantaged business or women-owned small business concerns, historically black colleges and universities, or colleges and universities having a student body that exceeds 20 percent Hispanic Americans or Native Americans. Agencies should coordinate with their

appropriate small business office for guidance in implementing this section of the Energy Policy Act of 1992 for appropriate qualifying procurements.

12. Acquisition considerations.

a. Some computer equipment is not covered under the current EPA Energy Star Computers Program and is thus exempt from Executive Order 12845. Included in this category is equipment such as minicomputers, mainframe computers, and their associated high-speed peripherals, (i.e. high-speed line printers). Mainframe computer terminals are also not covered by the Executive Order. Energy star qualifying mainframe computer terminals (monitors) are available from several manufacturers, however, and agencies should include Energy Star qualification as an evaluation criteria when specifying mainframe terminals.

b. There are also types of computer equipment which technically fall under the current Energy Star program, but for which there are currently few qualifying products. This includes file servers, workstations and X-terminals. It is anticipated that there will be Energy Star models of this equipment in the future; but in the near term, agencies will not be required to specify Energy Star qualification when purchasing these items. Agencies should include Energy Star as an evaluation criteria when soliciting bids for these products. As Energy Star qualified equipment becomes more widely available, agencies will be required to specify Energy Star compliance when procuring these items. Agencies should periodically review their exemptions with the purpose of bringing all their purchases into compliance with Executive Order 12845. Special equipment for personnel with disabilities that exceeds Energy Star requirements should be processed as an exemption under Executive Order 12845.

c. When determining whether to acquire energy efficient computer equipment, energy savings should be calculated to assess the impact of the equipment and whether there is a significant cost differential between the potential energy savings and any additional costs associated with the new equipment. Attachment B provides power levels and energy costs for typical computer equipment to aid in this analysis.

d. As existing contracts are extended or modified, agencies should add requirements for Energy Star microcomputer equipment, if possible. If Energy Star specifications are added to an existing contract for computer equipment, and if the Government changes are within the scope of the contract, the contract does not have to be recompeted.

e. Agencies should seek to modify existing contracts with Energy Star requirements as soon as practicable. On October 1, 1994, to the extent permitted by law, all contracts or solicitations must have specifications for Energy Star or energy-efficient computer equipment as stated in Executive Order 12845.

13. Other programs on energy efficiency.

a. DOE Industry Testing and Information Program. The Energy Policy Act of 1992 directs DOE to support a voluntary national testing and information program for office equipment that is widely used and offers a significant potential for energy savings. DOE test procedures and information dissemination are designed to allow purchasers to make informed decisions about the energy use, energy costs, and potential savings of alternative products. For more information, contact the DOE Building Technologies Office at (202) 586-1689.

b. Energy-Efficient Office Technology Consortium. Several large Government and corporate purchasers of office equipment in the U.S. and Canada have joined in an informal consortium with industry, electric utilities, state and Federal energy research agencies, and non-profit groups to help improve the energy efficiency of computers, printers, copy machines and other electronic office equipment. For more information, contact the Lawrence Berkeley Laboratory at (202) 484-0880.

JOE M. THOMPSON
Commissioner
Information Resources
Management Services

TECHNICAL GUIDANCE ON ENERGY-EFFICIENCY

1. Introduction. This guidance should be considered when doing a requirements analysis and for the design and operation of microcomputers, monitors, and printers. The system manager or end user using the guidance should recognize that each agency has different mission needs and physical space restrictions that may affect the system design and equipment selected. General energy reducing measures should be considered for all types of FIP equipment.

2. Energy efficiency and system design. Many decisions made when designing a system can greatly affect energy usage. Considering energy-saving features in the initial system design should lead to selection of the most cost-effective solution. Naturally, performance and cost considerations dominate system design decisions, but Federal regulations require that energy and environmental factors also be considered. Decisions to network, types of equipment to purchase, and where to locate printers and other equipment all affect total energy usage. The following provides more information about these issues.

a. Networking Microcomputers and Peripherals. As indicated below, LANs can reduce total system energy consumption by allowing more efficient use of equipment through sharing of peripherals; allowing users to communicate electronically rather than with paper; and providing centralized power management of equipment on the LAN.

(1) A well-designed LAN can allow many people to share peripheral devices. Allowing multiple users to access peripherals such as printers, scanners and external storage systems should provide adequate performance with a lower number of devices. This will usually save money and reduce operating costs as well as decrease energy costs.

(2) Electronic mail and other forms of electronic transmission of information can reduce energy costs for printing and copying.

(3) Use of non-display microcomputers as file servers can save several hundred dollars on equipment and electricity costs over the lifetime of each server. Also, a monochrome monitor or less powerful monitor can be used for a file server or microcomputer when a color monitor is not absolutely required.

Recently introduced multi-function equipment, such as front-end facsimiles for laser printers or a combination personal printer and scanner or copier, can, in most cases, save substantial amounts of energy, and reduce both initial and maintenance costs.

b. Microcomputers and monitors.

(1) Microcomputers and monitors should meet all performance requirements and be able to automatically power-down and recover from a power level of 30 watts or less each, unless the equipment always meets these low-power levels when not in use. Equipment should be shipped to the agency with the power management feature(s) enabled. Energy-saving features should be designed to work in the agency's specific computing environment (i.e., a given operating system and type of network, etc.). Some products that qualify for the Energy Star program may use manufacturer-specified software. Some models may meet Energy Star power levels in a standalone or base configuration, but not in the configuration required by the agency. Therefore, agencies should specify products that meet the Energy Star-defined power requirement when used under agency-specified conditions.

(2) Notebook computers almost always meet Energy Star requirements, but are generally more expensive than similarly capable desktop microcomputers. Notebooks can be cost-effective substitutes for desktop computers, especially for employees who travel. Notebook computers, however, often have smaller screens, poorer keyboards and less expendability. To counteract these deficiencies, docking stations that have better quality keyboards and monitors plus a LAN connection capability are available for use with notebook computers. If a monitor and docking station are used, they must have power management features if the energy saving capabilities of a notebook computer are to be retained. Purchasers considering this option should ensure that the notebook computer and docking station meets their other performance needs, such as speed, storage, and versatility.

(3) Color flat panel monitors can save at least 50 percent of the energy that traditional CRT monitors use in full power operation. The visual quality of active-matrix color LCD monitors is comparable to CRT monitors. LCDs take up much less desk space, and usually don't need a low-power mode because they use less then 30 watts of power. Because of some of these unique features, an Energy Star-labeled LCD could be selected over an Energy Star-labeled CRT.

c. Printers. Printers are not in use most of the time they are on. Wasted power consumption during this idle state could have a significant impact on overall energy use and operating costs. Several manufacturers have laser printers with a low-power idle mode in addition to a normal standby mode. This low-power feature can reduce the energy used by laser printers by one-half, without adding to the cost of the unit or inconveniencing users.

(1) A typical eight pages per minute laser printer might consume about 400 watts printing, and 85 watts in standby mode. If this printer does not have an additional low-power idle mode, it probably consumes 400 kwh/yr of electricity at a cost of almost $25 per year to operate. A similar laser printer, having an additional low-power energy-saver mode as specified by the Energy Star Computers program, would consume about 45 percent less energy and should provide significant savings in power usage over other non-equipped printers. Energy Star-qualifying products that meet the following default times or power down to low-power states and maximum power consumption in low-power mode are required by Executive Order 12845.

Printer Speed (Pages per Minute)	Default Time to Low-Power State (Minutes)	Maximum Power Consumption in Low-Power State (Watts)
1-7	15	30
8-14	30	30
15 and above, and color lasers	60	45

(2) One of the most effective ways to reduce printer energy consumption is to connect several microcomputers to one printer rather than using one printer per microcomputer.

(3) Inkjet printers are a good Energy Star qualifying alternative in some applications, especially for single-users. Inkjet print quality is often very good, and an inkjet's speed is comparable to a slow laser printer. Inkjet printers use less energy than laser printers, approximately 120 kwh/yr -- 50 percent less than a laser printer with a sleep mode.

d. Other Considerations.

(1) Reliability of energy-efficient equipment. Manufacturers have indicated that reliability will not be adversely affected by improvements in energy-efficiency or power management. Some vendors suggest that components that are designed to be cycled often may have a longer useful lifetime with power-managed equipment. Others note that some equipment such as monitors may yield a longer useful life by being turned off when not in use, as compared to the same monitor being left on 24 hours each day (i.e., if the rated life is a certain number of years, running it constantly wears it out faster).

(2) Reducing building energy requirements. Building energy issues should be thoroughly considered in the system design process. Also, when an agency contracts for development or operating services, it should separately identify tasks involving system wide energy use, including impacts on electrical service, power quality, and heating, ventilation and air conditioning systems.

(3) Any software developed or purchased should be compatible with the hardware power management features of the equipment.

3. Energy-Efficiency and Equipment Operation. A key component in reducing energy consumption is educating LAN administrators, end users and system managers on energy-efficient practices. The following are some of the major areas that should be emphasized:

a. Turning off Computer equipment during periods of non-use.

(1) Energy consumption of a microcomputer can be reduced by more than 75 percent by turning off the machine during non-work hours. A microcomputer operated only during normal working hours uses about 300 kwh/yr, as opposed to 1,314 kwh/yr if left on all the time. Turning a microcomputer off at night can save approximately $60 per year. If 5,000 users turned off their computer equipment at night, it could save taxpayers approximately $300,000 each year.

(2) Users should turn off microcomputers, monitors printers, and external modems (which are not connected to electronic mail applications) whenever they leave the office for any extended period of time when it will not be inconvenient to reboot or restart.

(3) For shorter absences, users should turn off just the monitor. This will reduce the unit's power consumption about 50 percent and not require a computer reboot to return to work.

b. Optimizing power-management capabilities.

(1) Manufacturers of power-managed microcomputers with the Energy Star logo may have multiple "sleep" or low-power modes that the user can choose from. Another option is the length of time the microcomputer is inactive before it automatically goes to "sleep".

(2) A number of factors need to be considered in setting the power management features for a given type of equipment. These include the actual power used in each active or sleep or standby mode; the patterns of usage, both within an office and between offices for a given piece of equipment; and the time required for the equipment to return to full operating capability and how this might affect user convenience and productivity.

(3) Agency end users should initially set equipment power management features for the shortest delay time before a low-power standby mode is invoked, and the "deepest" sleep (lowest power) mode possible, consistent with user requirements. Users should know how to modify the period of inactivity and "depth" of sleep mode for microcomputers, monitors and printers to reach the maximum level of energy savings to match user requirements.

c. Other operational considerations. Contrary to popular belief, most screen savers do not save energy. They are designed to save phosphors and prolong the usefulness of CRT monitors. They have a negligible impact on energy consumption and should not be installed as an energy-saving device unless the screen saver product actually has a power management feature.

(1) Various after-market devices are available to automatically turn the power off on microcomputers and peripherals. These products allow software control of timing, and "bookmark" features to save data to disk and allow users to easily return to their exact place in the file when returning to full power. These products can turn off computer equipment at night, thereby saving a significant amount of energy.

(2) Power saving products often completely turn off the product (as opposed to putting it into a low-power standby state), meaning that there might be a significant lag time before a user can resume work. Power saving products can be cost effective for some computer equipment and yield significant energy savings. "After-market" power-saving products (e.g., software or power strip connections) may be considered for existing systems to achieve energy savings. While the use of these products on new computer equipment is not encouraged, they may be considered an acceptable alternative to an exemption when bundled with a non Energy Star qualifying product, if the final product meets all of the Energy Star requirements. Agencies should assess whether or not the energy usage and first purchase costs of these after-market devices makes these devices cost effective for the life-cycle of the computer equipment. Thorough cost/benefit studies should be performed before purchases are made. All analyses should consider the remaining life of the computer equipment.

d. LAN operating tips. Managers should consider the energy implications of various LAN configurations to reduce energy use. For example, a LAN with several Energy Star microcomputers might save energy by allowing the file server to receive electronic messages and facsimiles at night, and distribute them all at once just before users arrive in the morning. Agencies should ensure that, if PC's are used with a file server, the PC's sleep mode functions are compatible with the network so that the PC "wakes up" if it receives a signal from the server. Otherwise, users may be inadvertently disconnected from the network if their system is "idle".

Energy Power Levels (and Assumed Operating Cycles) for Typical Computer Equipment

Equipment	Power Level Ready	Power Level Standby	Hours/Yr Ready	Hours/Yr Standby	Annual Usage[1]	Annual Cost[2]
Microcomputer[3] w/o monitor						
Desktop, conventional	75		4300	0	323	$19.38
Desktop, ENERGY STAR						
Economical	75	30	1000	3300	174	$10.44
Best Available*	15	8	1000	3300	41	$2.46
Laptop (notebook)	15	<3	1000	3300	25	$1.50
Monitor (15")						
CRT, conventional,color	75		4300	0	323	$19.38
CRT, ENERGY STAR, color						
Economical	75	30	1000	3300	174	$10.44
Best Available*	60	5	1000	3300	77	$4.62
CRT, Monochrome	50	30	1000	3300	149	$8.94
Flat-panel LCD, color#	50	<10	1000	3300	83	$4.98
Printer						
Laser, conventional	85		4750	0	404	$24.24
Laser, ENERGY STAR	85	30	1540	3210	227	$13.62
Inkjet	25	25	1540	3210	119	$7.14

* Best available model as of November 1993.

\# Smaller flat panel LCDs use fewer watts in an active mode.

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[1] Kilowatt hours.

[2] At average Federal electricity cost which is = $0.06/kwh.

[3] Microcomputer/monitor hours/year assumes 8 hours per day for 250 workdays, with one-third of the machines left on during non-work hours. Power management would affect 50% of workday hours and all non-work hours.

SAMPLE FORMAT FOR THE ENERGY STAR EXEMPTION REPORT

INTERAGENCY REPORT CONTROL NUMBER 0412-GSA-AN

Agency Name:

Bureau Name:

Acquisition/Contract/RFP Number (or some means of identifying the procurement):

Official's name and position granting the exemption:

Brief description of the equipment being exempted:

Rationale for the exemption (could be text or a code based on Section One of Executive Order 12845):

Identify and list the quantity of equipment being exempted (i.e. IBM PS 2, HP Laserjet IV, etc.):

Energy consumption/rating of the equipment being procured where possible (i.e. watt rating specified for various operating modes):

AMENDMENTS AND INTERIM RULES
FIRMR

Amendment Number	Date Signed	Title
1	10/18/90	Implementation of the FIRMR Improvement Project

Interim Rule Number	Date Signed	Title
1	10/15/93	Mandatory requirement for agencies to purchase energy efficient computer equipment

A. List of Current Bulletins

Bulletin Number FIRMR	Date Signed	Title
A-1	01/31/91	Federal Information Resources Management Regulation (FIRMR) Applicability
A-2	08/10/91	Availability of Electronic Versions of the Federal Information Resources Management Regulation
B-1	01/30/91	Electronic Records Management
B-2	01/30/91	Interagency Reports Management Program
B-3/Rev.1	06/15/92	Standard and Optional Forms Management Program
B-4	01/30/91	Selecting and Using Stationery and Related Forms
B-5	11/22/91	Interagency Committee on Medical Records
C-1	01/30/91	Sharing Telecommunications Resources
C-2	01/30/91	Disposition and Reuse of FIP Equipment
C-3/Rev.1	01/02/92	Federal ADP and Telecommunications Standards Index
C-4	01/30/91	Performance and Capability Validation of FIP Systems
C-5	01/30/91	Delegation of GSA's Exclusive Procurement and Multiyear Contract Authority
C-6/Rev.1	06/01/93	Federal Information Resources Management Review Program
C-7	01/30/91	Trail Boss Program
C-8	01/30/91	Information Accessibility for employees with Disabilities
C-9/Rev. 1	08/11/93	Nonmandatory GSA Services and Assistance Programs
C-10	01/30/91	Telecommunications Accessibility for Hearing and Speech Impaired Individuals
C-11	01/30/91	Sharing of Data Processing Capacity
C-12	01/30/91	Federal Software Exchange Program
C-13	01/31/91	Control of Long-distance Telephone Services
C-14	01/30/91	Conversion of FIP Resources
C-15	01/30/91	Mandatory Local Telecommunications Services

BULLETINS

Bulletin Number	Date Signed	Title
C-16	01/30/91	Emergency Telecommunications Services
C-17	01/30/91	Information Resources Service Center
C-18/Rev.1	06/02/93	Federal Telecommunications System 2000 (FTS2000)
C-19	01/30/91	Information Systems Security (INFOSEC)
C-20	01/31/91	National Security and Emergency Preparedness (NSEP) Telecommunications
C-21	01/30/91	Purchase of Telephones and Services (POTS) Contracts
C-22	09/18/92	Security and Privacy Protection of Federal Information Processing (FIP)
C-23	01/30/91	Limitation on the use of Halon in Fire Extinguishing Systems
C-24 (Rev. 1)	07/14/92	Use of Contracts Designated by the General Services Administration for Governmentwide Use by Federal Agencies
C-25	01/30/91	Bid Analysis and Reporting System (BARS)
C-26	01/30/91	Vendor Complaints and Agency Protests
C-27/Rev.2	11/19/93	Reuse of Outdated Federal Information Processing (FIP) Equipment
C-28	11/06/90	Computer Viruses
C-29	02/14/91	Acquisition of Used Computer Equipment by the Federal Government
C-30	11/12/91	Replacement of, and Screening for, Federal Information Processing (FIP) Equipment Under Exchange/Sale Authority
C-31	01/02/92	Use of Metric Measures in FIP Acquisitions the Federal Government

BULLETINS

Bulletin Number	Date Signed	Title
C-32	05/08/92	Vendor Provided Federal Information Processing (FIP) Training
C-33	06/05/92	Information Resources Procurement and Management Review (IR/PMR) Program
C-34	10/07/92	Video Teleconferencing and use of Federal Information Processing (FIP) Audiovisual and Telecommunications Resources
C-35	11/19/93	Energy-efficient microcomputers and associated computer equipment

FIRMR INDEX

FIRMR INDEX

FIRMR INDEX

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